

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-101. (canceled)

102 (currently amended). A method of enhancing the implantation of an embryo into the endometrium of an animal including the steps:

- a. ~~preparing a modified~~ modifying the embryo incorporating to incorporate a
glycolipid-attachment molecule construct; and
- b. transferring the modified embryo to the uterus of the animal;
where a glycolipid is exogenously modified to incorporate a binding part adapted
to enable the modified glycolipid to bind the attachment molecule.

103 (currently amended) A method as claimed in claim 102 where the
~~glycolipid-attachment~~ modified glycolipid is bound to an attachment molecule construct
~~comprises an exogenously modified glycolipid modified to incorporate a binding part~~
~~and where the respective binding parts are adapted to enable the modified glycolipid~~
~~and the modified attachment molecule to bind to each other~~ the modified glycolipid
~~either directly or indirectly through a bridging molecule, or directly.~~

104 (previously presented). A method as claimed in claim 103 where the
modification to the glycolipid is to the carbohydrate portion of the glycolipid.

105 (previously presented). A method as claimed in claim 103 wherein the attachment molecule is selected from the group consisting of: natural or synthetic carbohydrates or oligosaccharides; glycolipids; glycoconjugates; proteins or peptides; acyl groups; and polymers.

106 (previously presented). A method as claimed in claim 105 where the attachment molecule is selected from the group consisting of: poly L-lysine; antibodies; lectins; polyvinyl pyrrolidine; and functionally equivalent derivatives thereof.

107 (previously presented). A method as claimed in claim 106 wherein the attachment molecule is an immunoglobulin.

108 (previously presented). A method as claimed in claim 107 wherein the attachment molecule is immunoglobulin G (IgG).

109 (previously presented). A method as claimed in claim 103 where the attachment molecule is adapted to interact with the epithelial cells of the endometrium, mucus, mucin, or other endogenous or exogenously provided component of mucus.

110 (previously presented). A method as claimed in claim 109 where the attachment molecule is an endometrial attachment molecule.

111 (previously presented). A method as claimed in claim 103 where the glycolipid is selected from the group consisting of phosphoglycerides and sphingolipids.

112 (previously presented). A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by simple non-covalent binding interactions including ionic, van de Waals, water exclusion, electrostatic, hydrogen bonding and chelation binding.

113 (previously presented). A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by covalent bonding.

114 (previously presented). A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by avidin-biotin binding.

115 (previously presented). A method as claimed in claim 114 where the binding part of the glycolipid comprises biotin and the binding part of the attachment molecule comprises avidin.

116 (previously presented). A method as claimed in claim 114 where the binding part of the glycolipid comprises avidin and the binding part of the attachment molecule comprises biotin.

117 (previously presented). A method as claimed in claim 114 where the attachment molecules and the glycolipid are bound together through a bridging molecule.

118 (currently amended). A method as claimed in claim 117 where the bridging molecule comprises avidin and the binding part of both the attachment molecule ~~an~~ and the glycolipid comprises biotin.

119 (previously presented). A method as claimed in claim 117 wherein the bridging molecule comprises biotin and the binding part of both the attachment molecule and the glycolipid comprises avidin.

120 (previously presented). A method as claimed in claim 103 where the attachment molecule and the glycolipid are bound together by a chelation interaction between at least one chelator and a chelated metal ion.

121 (previously presented). A method as claimed in claim 120 wherein the binding part of both the attachment molecule and the glycolipid comprises a chelator.

122 (previously presented). A method as claimed in claim 120 wherein the chelator is a poly-histidine recombinant protein.

123 (previously presented). A method as claimed in claim 120 where the chelator is attached covalently to the glycolipid.

124 (previously presented). A method as claimed in claim 120 where the chelator is attached non-covalently to the glycolipid.

125 (previously presented). A method as claimed in claim 124 wherein the chelator is attached to the glycolipid via biotin or avidin.

126 (previously presented). A method as claimed in claim 120 where the chelated metal ion is Co^{2+} , Ni^{2+} or Cu^{2+} .

127 (previously presented). A method as claimed in claim 103 where the glycolipid modified to incorporate a binding part is a biotinylated glycolipid.

128 (previously presented). A method as claimed in claim 103 where the glycolipid of the ganglioside class that contains sialic acid groups, or a glycolipid of the neutral class that contains galactose.

129 (previously presented). A method as claimed in claim 103 where the attachment molecule is a molecule that has a binding affinity for molecules on cell membranes including the mucus coat of cell membranes.

130 (previously presented). A method as claimed in claim 129 wherein the molecules on cell membranes are receptor sites and/or blood group related antigens.

131 (previously presented). A method as claimed in claim 130 where the cell membranes are endometrial.

132 (previously presented). A method as claimed in claim 102 where the animal is a human or domesticated animal.

133 (previously presented). A method as claimed in claim 102 where the modified embryo is prepared from a species, hybrid or variety of animal different from the species, hybrid or variety of animal of the uterus.